



# UNITED STATES PATENT AND TRADEMARK OFFICE

MN

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,415	03/21/2001	Robert George Gilde	10.7C1	4060

64553 7590 04/19/2007  
F5 NETWORKS, INC. - PATENTS  
JOHN CAMPA  
401 ELLIOTT AVE. WEST  
SEATTLE, WA 98119

EXAMINER
----------

GEREZGIHER, YEMANE M

ART UNIT	PAPER NUMBER
----------	--------------

2144

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/814,415	<b>Applicant(s)</b> GILDE ET AL.	
	<b>Examiner</b> Yemane M. Gerezgiher	<b>Art Unit</b> 2144	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Response to Amendment***

1. The response received on 01/22/2007 has been entered. Claims 1-30 and 32 are pending in this application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-30 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The applicant recites:

a dispatch module and a flow control module included within a control component; a flow state communication channel established between the dispatch module and the flow control module that is independent of one

or more associated data flows; and the flow control module making available flow handling information related to the unassociated flow using the flow state communication channel ... (For instance, See amended claim 1).

The recited language of the newly added limitations as disclosed in the current claims is not supported by the original disclosure. Thus, is rejected as been directed to a new subject matter.

Furthermore, Claims 1-30 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 1 and similarly in claims 12, 23, and 32, the applicant recites functional limitations (See claim 1 as amended) directed to:

(a) a control component that includes a dispatch module and a flow control module;

a flow state communication channel established between the dispatch module and the flow control module that is independent of one or more associated data flows;

the dispatch module receives ...

the flow control module makes available flow handling information related to the unassociated flow using the flow state communication channel; and

(b) a switch component that employs the flow state communication channel ...

However, these functional limitations as recited in the claim(s) are not disclosed or described in the original specification of this instant application. There is no support in the specification that enables the recited functional limitations as amended. No reasonable description of the original specification supports these functional limitations by providing the actual steps of the WHAT and the HOW to make use of the claimed language that recite a claim limitations directed to a control component including therein a dispatch module and a control module and a flow state communication channel being established between the dispatch module and the flow control module that is independent of one or more associated data flows; and further the flow control module making flow handling information associated with the unassociated flow by utilizing the flow state communication channel as currently recited in the claims. The patent law requires that applicant must disclose his invention in such detail that it will not require undue experimentation for one skill in the art. Applicant did not comply this requirement of the first paragraph. The examiner contends (at the time the invention was made) that it would require undue experimentation for one of ordinary skill in the art of computer networks to make and use the claimed invention for the reasons set forth above. Applicant is reminded that no new matter is allowed in the amendment to the specifications under 35 U.S.C. 132 and 37 CFR 1.118(a).

### **Double Patenting**

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of copending Application No. 10150422 further in view of Martin (U.S. Patent Number 6,263,368) hereinafter referred to as Martin.

Although the conflicting claims are not identical in their presentation, they are not patentably distinct from each other because the difference between the two pending applications is a wording variation and that the instant application calls for additional limitation of independently scaling capacity of the switching/controlling component. However, independently scaling capacity of a switching or flow controlling component was commonly known in the art at the time the invention was made (for example see Allen et al. (U.S. Patent

Number 6,868,082), Title, Abstract, Column 2, Lines 7-23 and Sabaa et al. (U.S. Patent Number 6,781,986), Title, Abstract, Column 2, Lines 5-25). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to take such a functional limitation and have modified the claimed invention in order to facilitate load based processing of directing messages on the network. The claimed functional limitations as amended (recited above) are not disclosed by the copending application. However, in the same field of invention Martin disclosed a flow state communication channel established between the dispatch module and the flow control module that is independent of one or more associated data flows [see Fig. 4, # 46 (a communication channel) established between a dispatch module # 36 and a monitoring module # 34] a flow communication channel; and the flow control module making available flow handling information related to the unassociated flow using the flow state communication channel [Martin, Fig. 4 and Column 6, Lines 42-65]. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Martin related to session connection flow management and have modified the teachings of this instant application as recited in order “improved control of message and task distribution for multi-computer servers to enable more efficient use of the available resources” See Martin, Column 3, Lines 6-8.

Art Unit: 2144

Claim 1 of this instant application prior to the current amendment to the claim(s)	Claim 1 of the copending application 10150422
<p>1. An apparatus for directing communications over a network, comprising:</p> <p><u>a control component that receives a data flow requesting a resource</u> and determines when <u>the data flow is unassociated with a connection to a requested resource</u>, wherein the control component associates a selected connection to the requested resource when the control component determines the data flow is <u>unassociated with the connection to the requested resource</u>; and</p> <p><u>a switch component</u> that employs the connection associated with the data flow to <u>direct the data flow to the requested resource</u>, wherein a capacity of the switch component and a capacity of the control component are independently scalable to support the number of data flows that are directed to requested resources over the network.</p>	<p>1. An apparatus for directing communications over a network between a client and at least one content server, comprising: <u>a control component that is arranged to receive a resource request from the client</u>, select a new content server when the control component determines that at least one determined condition exists, and select a previously selected content server when the at least one determined condition fails to exist, <u>wherein the determined condition includes the client is unassociated with another</u> content server and the client is associated with another content server that is maintaining a maximum number of resource requests associated with the client; and</p> <p><u>a switch component</u> that is arranged to <u>direct a data flow between the client and the selected content server</u> such that the selected content server provides the requested resource to the client over the network.</p>

This is a provisional obviousness-type double patenting rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



Art Unit: 2144

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde (U.S. Patent Number 6,876,654) in view of Martin (U.S. Patent Number 6,263,368).

As per claims 1, 12, 23, 30 and 32: Hegde disclosed directing communications over a network [Abstract], comprising: a control component that receives a data flow requesting a resource and determines when the data flow is unassociated with a connection to a requested resource, wherein the control component associates a selected connection to the requested resource when the control component determines the data flow is unassociated with the connection to the requested resource [Abstract, Figs. 7&8, Column 3, Lines 1-22, Column 5, Lines 16-39]; and a switch component that employs the connection associated with the data flow to direct the data flow to the requested resource [Figs. 3&6, Column 3, Lines 1-8, Column 4, Lines 10-12, Column 5, Lines 60-66, Column 6, Lines 30-33].

The teachings of Hegde substantially disclosed the invention as claimed. However, was silent about independently scalable capacity of the switching and/or the control component in support of the number of data flows that are

directed to requested resources over the network. However, as evidenced by the teachings of Martin disclosed load balancing among group of servers in a cluster of servers, receiving plurality of data flows between clients and servers by utilizing a switching component and a control component (dispatcher(s) where the capacity of the switching and controlling component is adjustable to meet the required load in directing the inbound and outbound data flows (Martin, Abstract, Fig. 3, Fig. 4, Figs. 8-10 and Column 4, Line 35 through Column 5, Line 29). Furthermore Martin disclosed a flow state communication channel established between the dispatch module and the flow control module that is independent of one or more associated data flows [see Fig. 4, # 46 (a communication channel) established between a dispatch module # 36 and a monitoring module # 34] a flow communication channel; and the flow control module making available flow handling information related to the unassociated flow using the flow state communication channel [Martin, Fig. 4 and Column 6, Lines 42-65]. Thus, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Martin related to scaling the capacity of flow switch and dispatcher(s) and have modified the teachings of Hegde related to handling a new data flow (detected unassociated data flow) in order efficiently switch incoming load responsive to the volume of message traffic on the network (Column 5, Lines 5-13).

As per claim 2: Hegde disclosed a control component employing a buffer to list each data flow that is associated with the connection to the requested resource [Fig. 3, # 75, Column 5, Lines 20-26 and Column 9, Lines 47-54].

As per claim 3: Hegde disclosed a control component employing a table to list each data flow associated with the connection to the requested resource [Abstract, Fig. 3, Reference # 70].

As per claims 4: Hegde disclosed a control component categorizing a plurality of data packets for each data flow [Column 3, Lines 1-22].

As per claim 5: Hegde disclosed determining when an event associated with the data flow occurs [Abstract and Column 3, Lines 1-22 and Column 6, Lines 30-33].

As per claims 6: Hegde disclosed a control component categorizing each event [Fig. 7 and Column 3, Lines 1-22 and Column 6, Lines 30-33].

As per claims 7-9, 19, 20 and 29: Hegde disclosed a flow signature (includes information about a source and a destination and a timestamp for each data packet in the data flow) that is associated with the data flow, the flow signature is compared to a set of rules for handling each data flow that is associated with the connection to the requested resource [Column 5, Lines 16-39, Column 7, Lines 1-14].

As per claims 10, 14, 15: The already combined teachings of Martin and Hegde disclosed collecting metrics regarding each connection to each resource [Martin, Column 3, Lines 43-67] and performing load balancing for each flow based on information collected by the flow component [Figs. 8-10, Column 3, Lines 30-49 and Column 6, Lines 17-23].

As per claims 11, 17 and 18: Hegde disclosed a server array controller that includes the action of the control component and switch component having therein interfaces for internal and external networks [Fig. 3, # 40, Column 4, Lines 1-12, Fig. 4 # 60 and Column 5, Lines 40-59].

As per claim 13: Hegde disclosed the control component performing control and policy enforcement actions for each flow [Column 5, Lines 26-39].

As per claim 21: Hegde disclosed a session that is associated with the flow, the session including TCP and UDP [Column 7, Lines 15-25].

As per claim 22: Hegde disclosed a control component determining when a new flow occurs (flow information not on the switching/routing table) based on the detection of an event [Abstract, Column 3, 1-22 and Column 5, Lines 25-39].

As per claims 24-28: Hegde taught employing a state sharing message bus (SSMB) between a switch and a control component [Fig. 3, and Column 5, Lines 16-39, the switch/flow module interfaced with the control (CPU running

therein a control program) sharing state status information of incoming requests in the communication network] and layering the SSMB on top of a session, the session including TCP and UDP [TCP and UDP sessions sharing state information having therein a service message header ("ssmb") layered on a TCP session over an IP packet independently performed between the control component and the switch/flow component transmission with no timing relationship between the two components, where the communication messages utilizing TCP and UDP packets perform multicasting and/or unicasting over the communication network, Figs. 3-4, Column 7, Lines 15-25 and Column 10, Lines 14-62].

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

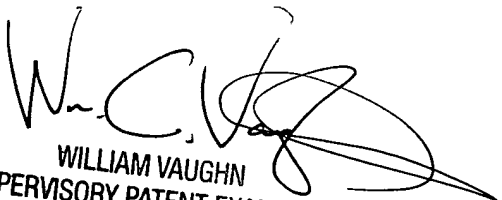
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane M. Gerezgiher whose telephone number is (571) 272-3927. The examiner can normally be reached on 9:00 AM - 6:00 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2144

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner,  
Y. Gerezgiher  
AU: 2144

  
WILLIAM VAUGHN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100